

Remarks/Arguments

Applicant has amended claims 9, 11, 18, 20 and 23 to correct minor informalities. In doing so, Applicant has not added matter.

There are 31 claims pending in this application, including independent claims 7, 21, 25, 31, and 37. New Claims 31 – 37 are added. The Office Action dated February 15, 2005 rejected claims 21, 22, 25, 26 27, and 28 pursuant to 35 U.S.C. §102 as being anticipated by both U.S. Patent No. 5,373,595 (hereinafter Johnson) and U.S. Patent No. 4,197, 837 (hereinafter Tringalii). The Office Action further rejected claims 7-20, and 29 pursuant to 35 U.S.C. §103 as being unpatentable over Johnson in view of U.S. Patent No. 4,949,414 (hereinafter Thomas). Applicant respectfully traverses each and every rejection.

CLAIMS 7-20

The Office Action rejected Claim 7 pursuant to 35 U.S.C. §103 as being obvious and therefore unpatentable over Johnson in view of Thomas. In order for these references to render Claim 7 obvious, the references must at least teach or suggest each and every limitation of the claim. According to the Office Action, Johnson does not disclose but Thomas provides a basic teaching of the use of pressure sensors operatively connected to air supply lines of the system in Claim 7. The Office Action, however, overlooked the absence of a disclosure, a teaching, or a suggestion in Johnson or Thomas of another claim limitation of Claim 7. Therefore, the combination of Johnson and Thomas fails to renders Claim 7 obvious, and Applicant respectfully traverses this rejection.

Claim 7 is directed to a system for supplying air and controlling the flow of air into and out of the chambers of a patient-supporting low air loss air mattress. The system comprises a controllable blower having an intake port and an exhaust, air supply lines leading to the chambers of an air mattress, pressure sensors operatively connected to the air supply lines, and a means for selectively directing air from the blower exhaust port to the chambers of the air mattress or routing the flow of air from the air mattress into the blower intake port. One features of the invention of Claim 7 is to provide an air mattress, an air supply, and a control system that is able not only to operate in different modes to supply a flow of air to a mattress but also to quickly deflate the mattress and reverse the flow of air so that cardiopulmonary resuscitation

(CPR) can be administered to a patient supported by the mattress. See page 1, lines 31-54 of the specification. Therefore, the air mattress supply and control system of Claim 7 contains a dual-function three port valve for supplying a flow of air to inflate a mattress and reversing the flow of air to deflate the mattress.

Johnson is directed to an air support device adapted for placement on the frame of an support mattress. The support device comprises an air flow pump, air flow conduits, and an air flow distribution valve, and a switching means, remote and/or on a microprocessor control console, to allow a flow of air through an air supply tube to the top of an air cell support bag of the mattress and through an air flow distribution manifold to air cells of the mattress, or alternatively to allow interruption of an air flow into the mattress so as to deflate the mattress for emergency CPR on a patient supported by the mattress.

Thomas is directed to a low air loss patient support system. The system comprises a frame having at least one articulatable section; a rigid support member carried by the frame; a plurality of elongated inflatable sacks, each of which is disposed to extend transversely across the support member; at least one of the elongated inflatable sacks with a pair of end chambers, a pair of intermediate chambers, a first restrictive flow passage connecting one of the end chambers to the adjacent intermediate chamber, and a second restrictive flow passage connecting the other end chamber to the second intermediate chambers, a means for supplying air to each of the elongated inflatable sacks; and a means for maintaining a predetermined pressure in each of the end chambers. The means for maintaining a predetermined pressure in the sacks includes a pressure control valve. In the preferred embodiment, there are a plurality of pressure control valves, each of which controls the pressure in a plurality of sacks by means of being connected to a gas manifold that carries air from the pressure control valve to each of the sacks. Each of the pressure control valves preferably includes a pressure transducer that communicates with the valve passage to sense the pressure therein.

With respect to Thomas, it describes a low air loss patient support system with a first means for supplying a flow of air to inflate an air mattress and a second means to maintain a predetermined pressure in the mattress. Because neither Johnson nor Thomas discloses, teaches, enables, or suggests an operative dual-function three port valve for supplying a flow of air to inflate a mattress and reversing the flow of air to deflate the mattress, the combination of these

references fails to teach or suggest each and every limitation of Claim 7. Therefore, the combination of Johnson and Thomas fails to render Claim 7 obvious. Further, amended Claim 7 also requires a three port, two position gate member, which is not taught by any reference. There is no teaching in any reference that can lead to such a simple valve structure. Additionally, Applicant is investigating Johnson's disclosure to determine if it enables the invention at all. Instead, Claim 7 is in an allowable form, and Applicant respectfully requests that it be allowed in a timely fashion.

Claims 8-20 depend from Claim 7. Because Claim 7 is in an allowable form, each of the claims that depend from Claim 7 is also in an allowable form for at least the same reason asserted above. Therefore, Applicant respectfully requests that claims 2- 20 also be allowed in a timely fashion.

CLAIMS 21-24

The Office Action rejected independent claim 21 pursuant to 35 U.S.C. §102 as being anticipated by Johnson and Tringalii. In order to anticipate claim 21, Johnson and Tringalii must respectively set forth each and every element of claim 21 either expressly or inherently. Johnson and Tringalii both fail in this regard, and Applicant therefore respectfully traverses this rejection.

Amended Claim 21 is directed to a method utilizing a blower that produces a flow of air in pneumatic communication with the internal chamber of an air mattress to either inflate or deflate the mattress using a single port in either direction. Further, the claim includes two limitations for the blower structure. First, the blower contains an outlet and it inflates the mattress by directing the flow of air to the mattress in an inflation direction from the blower outlet. Second, the blower contains an inlet, and it deflates the mattress by directing the flow of air from the mattress in a deflation direction to the blower inlet.

Johnson describes an air supply pump in fluid communication with an air distribution valve to inflate or deflate an air support mattress. To inflate the mattress, air intake to the air supply pump for supplying air to the air distribution valve generally flow from the atmosphere to the intake side of the air supply pump. (Col. 14, lines 56-60). To deflate the mattress, air in the mattress is drawn into the outlet of the air supply pump and then released into the atmosphere. (Col. 14, line 40-41; Col. 15, line 1).

Tringalii describes an air control system for producing periodic inflation and deflation of a pad. Stated generally, compressed air is discharged from a compressor and passed into the valve body of a control valve assembly, and then into the rotary valve member of the control valve assembly where pressurized air is distributed to the inflatable chamber of the pad. (Col. 5, lines 15-21). Pressurized air may escape through perforations of the pad, thereby deflating the pad. (Col. 2, lines 25-26).

Although the air supply pump and the compressor discussed in Johnson and Tringalii respectively introduce a flow of air ultimately to inflate the mattress/pad and also play a role in deflating the mattress/pad, neither at any time discloses, teaches, or suggests that the air supply pump or the compressor is capable of blowing air in two directions: one blows air to the mattress/pad, while the other blows air from the mattress/pad to the air supply pump or the compressor. For example, Johnson uses the force of suction generated by the air supply pump to deflate the mattress, whereas the perforations of Tringalii's pad allow air to escape from and deflate the pad. Again, no reference teaches the simplistic struction of the claimed commercially successful valve. For at least these reasons, Johnson and Tringalii do not anticipate Claim 21. Rather, Applicant believes that Claim 21 is in allowable form and respectfully requests that it be allowed in a timely fashion.

Claims 22-24 depend from Claim 21. Because Claim 21 is an allowable form, each of the claims that depend from Claim 21 is also in an allowable form for at least the same reasons asserted above. Therefore, Applicant respectfully requests that Claims 22-24 also be allowed in a timely fashion.

CLAIMS 25-30

The Office Action rejected Claim 25 pursuant to 35 U.S.C. §102 as being anticipated by Johnson and Tringalii. In order to anticipate Claim 25, Johnson and Tringalii must respectfully set forth each and every element of Claim 25 either expressly or inherently. Johnson and Tringalii both fail in this regard, and Applicant therefore respectfully traverses this rejection.

Claim 25 is directed to an inflatable patient support apparatus. This apparatus includes an internal chamber, an air transmission device operable to provide air flow into and out of the internal chamber, and a three port valve controlling the air flow to inflate or deflate the

mattress. Therefore, at a minimum, the apparatus of Claim 25 incorporates an air transmission device, subject to the control of a multiple-port valve, to either inflate or deflate the mattress.

As stated above, Tringalii uses the perforations on a pad to release air from and deflate the pad. Tringalii does not disclose, teach, or suggest use of a controllable air transmission to deflate the pad. Therefore, Tringalii and Johnson do not disclose, teach, or suggest the apparatus of Claim 25. For at least these reason, Johnson and Tringalii do not anticipate Claim 25. Rather, Applicant believes that Claim 25 is in allowable form and respectfully requests that it be allowed in a timely fashion.

Claims 26-28 depend from Claim 25. Because Claim 25 is an allowable form, each of the claims that depend from Claim 25 is also in an allowable form for at least the same reasons asserted above. Therefore, Applicant respectfully requests that Claims 26-28 also be allowed in a timely fashion.

As stated above, Tringalii uses the perforations on a pad to release air from and deflate the pad. Tringalii does not disclose, teach, or suggest use of a controllable air transmission to deflate the pad. As such, Tringalii does not anticipate Claim 30. Accordingly, Applicant believes that claim 30 is in allowable form and respectfully requests that it be allowed in a timely fashion.

Copied Claim	Applicant's Original Disclosure as formatted in U.S. Patent 6,698,046
37. A rapid inflation and venting air valve comprising a rotary element, an outer casing, an inner rotary body, a rotary cover, and a blower and being placed in a first lateral cover and a second lateral cover; characterized in that:	page 2, lines 44-47; page 2, lines 63-66; page 4, lines 60-64
an inner side of the rotary element is extended with a driving shaft; the driving shaft passes through a predetermined portion of the first lateral cover to be connected to the outer casing;	page 4, lines 60-64.
the outer casing is a hollow tube and; a lateral side of the outer casing has an air inlet and a plurality of jointing tubes; one end of the outer casing is an opening portion; the opposite side with respect to the opening portion is a	page 4, lines 60-64.

closing end; the closing end has a plurality of apertures and a through hole;	
the inner rotary body has a size slightly smaller than the outer casing; a spacer is installed in a center of the inner rotary body; a first opening and a second opening are formed on one end portion of the inner rotary body; the first opening and the second opening are exactly at two sides of the spacer; a lateral side of the inner rotary body is a shroud and a notch is formed on the shroud; a driving axial hole is formed on the end portion having the first and second openings;	page 5, lines 9-42.
the rotary cover is utilized to cover the inner rotary body; the rotary cover exactly covers the inner rotary body and then the two are assembled as one integral body; the shape of the rotary cover is exactly corresponding to the opening portion of the outer casing; the rotary cover has two cover openings; and	page 4, lines 60-64.
the blower has a wind transfer tube and a wind suction opening; a cover plate is used to cover one end of the blower having the wind suction opening; and a wind guide mask is installed aside the cover plate for guiding airflow.	Title: page 2, lines 63-66.

CONCLUSION

For at least the reasons asserted above, the cited references, namely Johnson, Tringalii, and Thomas, do not render unpatentable claims 7-37 as amended. Applicant believes that Claims 7-36 are individually in a patentable form. Applicant, therefore, respectfully requests that Claims 7-36 be allowed in a timely fashion.

Newly presented Claim 37 is copied verbatim from U.S. Patent No. 6,832,629, granted December 21, 2004, to Shang Neug Wu. Claim 37 corresponds to Wu's Claim 1. In the future, Applicant may pursue an interference proceeding or relief of other kinds on the priority issue of the same invention in Applicant's Claim 37 and Wu's Claim 1 as well as the issue of ownership of said invention. Applicant's copied claim may be specifically applied to Applicant's disclosure as follows:

The above Amendment is fully responsive to the Office Action dated February 15, 2005. If these are any matters which can be further clarified by telephone, the Examiner is requested to contact the undersigned attorney.

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